



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,693	09/29/2003	Steve Zhihua Zeng	1459-0300620	4166

29331 7590 06/23/2006

LARSON NEWMAN ABEL POLANSKY & WHITE, LLP
5914 WEST COURTYARD DRIVE
SUITE 200
AUSTIN, TX 78730

EXAMINER

WANG, JIN CHENG

ART UNIT PAPER NUMBER

2628

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/673,693	Applicant(s) ZENG, STEVE ZHIHUA	
	Examiner Jin-Cheng Wang	Art Unit 2628	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).


4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☐ Applicant's reply has overcome the following rejection(s): _____.
 6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: _____.
 Claim(s) objected to: _____.
 Claim(s) rejected: 1-6 and 10-18.
 Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See below.
 12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
 13. ☐ Other: _____.


Kee M. Tung
Primary Examiner

Applicant argues that the Office has taken Official Notice and the Finality of the last action should be withdrawn. In response, the Office has not taken Office Notice. Applicant only cited a partial sentence from the Office Action for the arguments' sake.

In the last Office Action, it was stated, that "it is well known that the number of shifts S may be determined from the output resolution M and the number of phases P , e.g., $S = M \ll P$ and the number of phases may be determined from the output resolution M and the number of shifts $M \ll S$, as shown in Parker column 8 that the number of phases 9 is determined from the output resolution 400 by right shifting".

In the applicant's argument after Final Rejection, applicant completely ignored the sentence that the number of phases and the number of shifts have been taught in column 8 of Parker. The Examiner has meant that this teaching of Parker is well known to the general public at the time the invention was made. It is not an Official Notice.

Applicant has also argued with respect to the obviousness rejection set forth in the last action. The response is given as follows.

Parker discloses control data (structure) within a CONVERSION CONTROLLER (See Fig. 2) controlling the resolution conversion including the input resolution, the output resolution, and the number of phases or the number of coefficients for the filter in Fig. 2.

The input resolution of Parker meets the claim limitation of "a first variable" because it is more specific to "a first variable". The output resolution of Parker meets the claim limitation of "a second variable" because it is more specific than applicant's claim limitation of "a second variable". The number of phases of Parker in column 8 meets the claim limitation of "a third variable".

It is OLD and well known that the number of shifts S may be determined from the output resolution M and the number of phases P , e.g., $S = M \ll P$ and the number of phases may be determined from the output resolution M and the number of shifts $M \ll S$, AS SHOWN IN PARKER COLUMN 8 that the number of phases 9 is determined from the output resolution 400 by right shifting. Therefore, Parker strongly suggests the claim limitation.

Applicant's claim limitation of "a first variable", "a second variable" are broadly construed because the number of input pixels and the number of output pixels set forth in the claim 1 are not variables with respect to a specified image frame. Even assume the first variable and the second variables are "variables" derived from the input resolution and the output resolution, the third variable is not derived from the second variable because the third variable is derived from the output resolution from Paragraph 0018 of applicant's specification. Moreover, as the claim limitations set forth in the claim 1 are broadly construed. First, the three variables set forth in the claim 1 cover all combination of the values. For example, if a number of right shifts as recited take a large number, when applied to the second variable, the third variable becomes a zero value, making the method inoperable. Finally, applicant's claim 1 includes a limitation "when applied to the second variable." However, the third variable is not derived from the second variable, it is derived from a fixed value, i.e., the output resolution.

Because the claim limitations are broadly construed, they are subject to broad reasonable interpretations. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997). See MPEP § 2111 - § 2116.01 for case law pertinent to claim analysis.

In view of the Parker's teaching, Parker at least teaches the control data within a controller controlling the resolution conversion and filter construction with the number of the coefficients derived from the output resolution, i.e., 9 phases from the output resolution of 400 (See column 8). Parker at least discloses the input pixels, the output pixels and the number of phases as controlled by the conversion controller 26 of Fig. 2 and therefore discloses the three variables including the input resolution/input tile size, output resolution/output tile size and the number of phases. Parker at least suggests the claim limitation of "the three variables" as recited in the claim 1.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have constructed a control word OR CONTROL DATA from the plurality of resolution parameters for determining the output pixel values based on the input and output resolution, phases and registration (column 8).

Although Parker does not expressly disclose, "a number of right shifts", however, this claim limitation is related to the selection of the number of phases in an adaptive filtering wherein the adaptive filtering is well known in the art. Moreover, applicant's choice of the number of phases is determined from the number of output pixels, as being right shifted. This determination of the number of phases as recited in the claim 1 covers a broad range of values. Additionally, the number of output pixels and the number of right shift set forth in the claim 1 are generally unknown. However, from applicant's specification, applicant's number of phases is actually a fixed number derived from the output resolution (See Paragraph 0018 of applicant's specification wherein M and L are fixed quantities). Applicant claimed a variable phase derived from the number of output pixels which could be any arbitrary number.

Moreover, Greggain teaches an adaptive filter wherein the number of phases is determined using the filter lookup table as a function of the output resolution, i.e., the target increments and thus Greggain teaches an adaptive filtering wherein the number of phases depends upon the output resolution. Greggain mapping the target increment into a specific filter size or the number of phases (column 2). Greggain's number of upsample increments or the number of phases used in the adaptive filtering is determined using the right shifting the target output resolution parameter such as the target increment and moreover, Greggain's look up table for mapping the output resolution into the number of phases or the filter size may also be determined by the right shifting. Greggain thus expressly discloses "a third variable" from the output of the filter look-up table which maps the filter size to a filter factor and then right-shifts the target increment by this amount to generate the number of phases.

Therefore, having the combined teaching of Parker and Greggain as a whole, one of ordinary skill in the art would have found it obvious to incorporate adaptive filtering of Greggain into Parker's method to construct the number of phases from the output resolution by right

shifting the number of output pixels in accordance to the user's defined target increments resulting in correctly Nyquist bandlimited target pixels or lines or frames of the warped images (See column 1).